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### AMENDMENTS TO THE CLAIMS

1. (currently amended) An apparatus for simulating corrosion activity due to reactive sulfur compounds and/or naphthenic acid in liquid and vapor/condensate corrosion environments comprising:

- a) a container, including a lower region containing said liquid including said reactive sulfur compounds and/or naphthenic acid, and an upper region, including a condenser,
- b) a heater for providing heat to said lower region such that said liquid is maintained at a given temperature,
- c) a vacuum pump for providing a partial vacuum at a given pressure in said upper region of said container,
- d) one corrosion probe removably positioned in said liquid, and
- e) a second corrosion probe removably positioned above said liquid.

2. (currently amended) The apparatus of claim 1 wherein said container includes an insulated column and said lower region is a flask is in open communication with said insulated column and said upper region is a condenser is in open communication with said insulated column.

3. (original) The apparatus of claim 1 further including a means for providing an inert gas to the interior of said container.

4. (original) The apparatus of claim 1 wherein said inert gas is nitrogen.

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5. (original) The apparatus of claim 2 wherein said condenser is water-cooled.

6. (original) The apparatus of claim 1 wherein said corrosion probes are maintained in position with glass hooks.

7. (original) The apparatus of claim 1 wherein said given temperature of said liquid is determined with a thermocouple.

8. (original) The apparatus of claim 1 wherein said vacuum pump is a mechanical pump.

9. (original) The apparatus of claim 1 wherein said apparatus is used to evaluate corrosion inhibitors.